AND INTERNERVOUS APPROACH

AMIS advantages

No muscles cut

The preservation of all muscles may provide:

- Shorter hospital stay [2,12]
- Smaller skin incision [3]
- Shorter rehabilitation [3,4]
- Decreased post-operative pain [1,3]
- Prevention of limping [6,7,8,9]
- Less blood loss [3,12]
- Reduced risk of dislocation [4,5]
- Faster return to daily activities [2,10,11]

Better short term results

Not only better short term results

As a result of the AMIS technique, risks are decreased when compared to a standard technique **BOTH IN THE SHORT AND MEDIUM TERM**.

It has been demonstrated that:

- After total hip replacement, trochanteric soft tissue abnormalities may be associated with residual trochanteric pain and limping, in symptomatic patients. Defects of the abductor tendons and fatty atrophy of the gluteus medius and the posterior part of the gluteus minimus muscle are rare in asymptomatic patients.[7,8]
- The use of the anterior approach for primary total hip replacement shows, at one year after surgery, better functional results and a smaller extent of injury in the muscle and tendon units compared to other approaches.[9,13]

[1] *Arthroplastie totale de hanche par voie antérieure et son évolution mini-invasive; F. Laude et al.; EMC; 2004, 44-667-B*
[2] *What's new in hip arthroplasty; MH Huo et al; JBJS Am; 2005 Sep, 87(9):2133-46*
[3] *Minimally Invasive total hip arthroplasty: anterior approach; F. Rachbauer; Orthopäde, 2006 Jul;35(7):723-4, 726-9*
[4] *Mini-incision anterior approach does not increase dislocation rate: a study of 1037 total hip Replacement; T Siguier et al; Clin Orthop Relat Res, 2004 Sep, (426): 164-73*
[5] *Dislocation after hip hemiarthroplasty: anterior versus posterior capsular approach.; JB Bush et al; Orthopedics. 2007 Feb;30(2):138-44*
[6] *Muscular damage after total hip arthroplasty: conventional versus minimally invasive anterior approach.; Dr Dora, Dr Kalberer; AOA 2008, Australia, Hobart*
[7] *Abductor Tendons and Muscles Assessed at MR Imaging after Total Hip Arthroplasty in Asymptomatic and Symptomatic Patients. C. Pfirmann et al., Radiology 2005, 235: 969-976.*
[8] *MR imaging of the abductor tendons and muscles after total hip replacement in asymptomatic and symptomatic patients. PD Dr. Dora, EFORT 2007*
[9] *Der anteriore Zugang für die minimal-invasive HTEP. C Dora; Leading Opinions Sept 2006, 1/2006*
[10] *Rapid Rehabilitation and recovery with minimally invasive total hip arthroplasty; RA Berger et al; Clin Orthop Relat Res, 2004, (429): 239-247*
[11] *The minimally invasive anterior approach to hip arthroplasty; RE Kennon et al; Orthopäde, 2006 Jul, 35 (7): 731-7*
[12] *Single-incision anterior approach for total hip arthroplasty on an orthopaedic table; JM Matta et al; Clin Orthop Relat Res, 2005 Dec, (441): 115-24*
[13] *Bremer AK, Kalberer F, Pfirrmann CWA, Dora C. Soft-tissue changes in hip abductor muscles and tendons after total hip replacement: Comparison between the direct anterior approach and the transgluteal approaches approaches. J Bone Joint Surg (Br) 2011–July; 93-B:886-9.*

AMIS
ANTERIOR MINIMALLY INVASIVE SURGERY
IN HIP REPLACEMENT

Improves quality of life!

"My family couldn't believe that I was up and about 2 days after the surgery and were amazed by my quick recovery."
Mr. T. B., age 68, patient

"The result of my surgery is nothing short of perfection."
Mrs. L. R., age 70, patient

For further information visit the website:
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AMIS: a true intermuscular and internervous approach

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AMIS
ANTERIOR MINIMALLY INVASIVE SURGERY
IN HIP REPLACEMENT

Medacta International

Total Hip Replacement

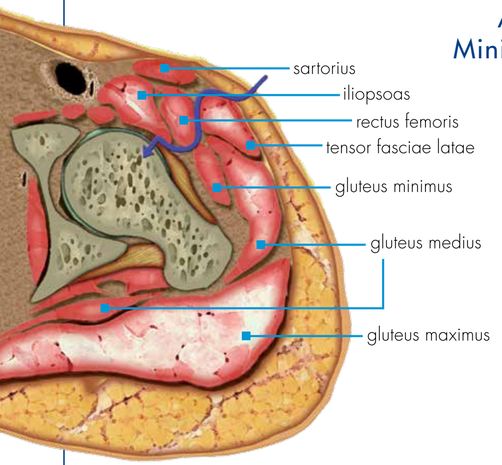
AMIS: a true intermuscular and internervous approach

Medacta International

AMIS: A TRUE INTERMUSCULAR AND INTERNERVOUS APPROACH

The anterior approach

Total Hip Replacement is a safe and clinically proven surgical procedure. Implant manufacturers and orthopaedic surgeons have been working in partnership on total hip replacement for many years, the former improving and mastering the materials used and the latter refining the implantation techniques, introducing many "so called" minimally invasive surgeries.



AMIS by Medacta: true Minimally Invasive Surgery

A TRUE MINIMALLY INVASIVE SURGICAL TECHNIQUE is characterised by the preservation of muscles, nerves and tendons encountered during the surgery to the hip joint capsule, resulting in a reduced skin incision.

AMIS (Anterior Minimally Invasive Surgery) is a true minimally invasive technique.
Other approaches advertised as minimally invasive (posterior, lateral or double incision approach) are associated with muscle, nerve and/or tendon injury and thus are only reduced skin incision techniques.

The anterior approach, strengthened by several years of clinical experience, is the only technique which follows intermuscular and internervous planes to reduce the risk of injury to muscles, tendons, vessels and nerves.[1]

The surgical procedure

Access to the hip joint

The surgeon makes a short anterior skin incision to allow access to the hip joint. The hip joint capsule is exposed, preserving all the muscles encountered in the path, the surgeon then removes the head of the femur.

Prosthesis implantation

The bone of the acetabulum and the femur is prepared to receive the prosthesis by removing any remaining cartilage and some surrounding bone using specialised instruments.
For a cementless procedure the acetabular shell is impacted directly on the bone and a liner inserted into the implant. For a cemented technique the cup is positioned after the cement application.
Following the above, a stem is inserted, with or without cement being applied, depending on the type of implant chosen. A ball head is then added to the top of the stem.

Final reduction and closure

After implantation, the femoral head is placed into the acetabulum (prosthesis reduction), and the hip joint is recreated.
Finally, the skin is closed by stitches.

Rehabilitation

Rehabilitation - standing up and walking with arm crutches or a walker - can usually **START THE DAY OF THE OPERATION**, subject to the doctor's approval. The risk of dislocation is minimal. Other techniques may limit the range of post-operative movements, this may not be the case with an AMIS.

In comparison with standard techniques, the AMIS approach potentially reduces post-operative pain[2,3] and rehabilitation time.[3,4]

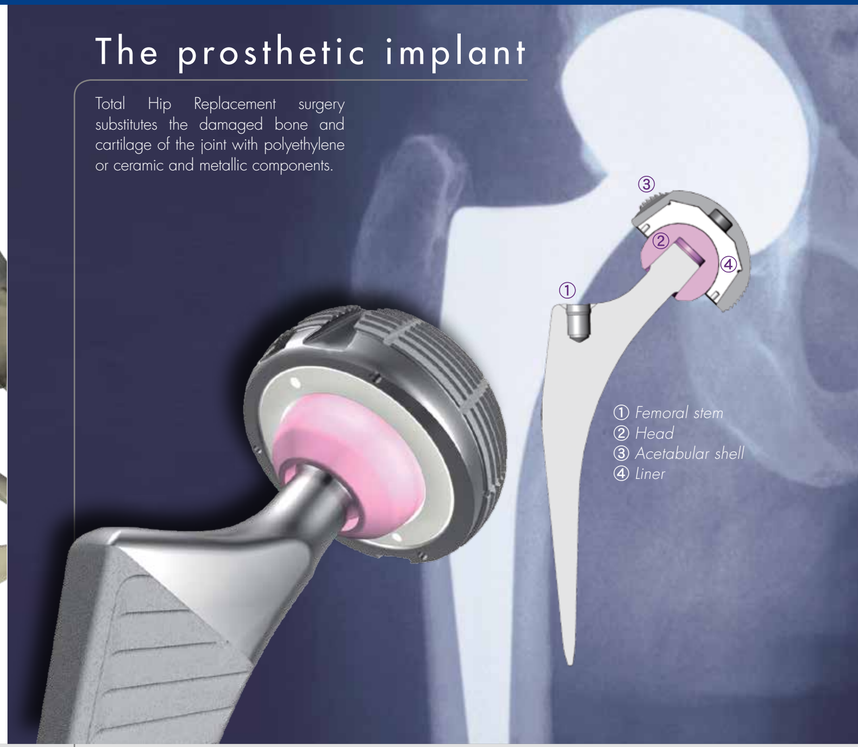
Thanks to the AMIS technique, muscle preservation allows for the immediate stability of the hip.[5]

Minimising muscle damage reduces the chances of limping.[6,7,8,9]

Due to the AMIS technique, the return to daily activities is faster.[2,10,11]

The prosthetic implant

Total Hip Replacement surgery substitutes the damaged bone and cartilage of the joint with polyethylene or ceramic and metallic components.



A hip prosthesis is an artificial articulation composed of a femoral stem with a head (sphere) and a socket cup (acetabular shell and liner, if necessary).

① The femoral stem is made of metal (usually a titanium or cobalt chrome alloy or stainless steel).
② The head is made of ceramic or metal.
③ The cup is made of 1 or 2 pieces, depending on the procedure: cemented (usually only one component of polyethylene) or cementless (metallic acetabular shell and liner).
④ In the case of a metallic acetabular shell a ceramic or polyethylene liner articulates against the head.